






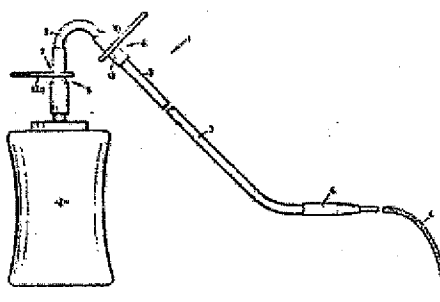


Suction bottle with a drain which can be inserted into an area of operation.**Publication number:** EP0009233**Publication date:** 1980-04-02**Inventor:** HARLE ANTON DR**Applicant:** STERIMED GMBH (DE)**Classification:****- International:** A61M39/28; A61M1/00; A61M39/00; A61M1/00; (IPC1-7): A61M1/00; A61M27/00**- European:** A61M39/28F2**Application number:** EP19790103502 19790918**Priority number(s):** DE19782840865 19780920**Also published as:** DE2840865 (A1)
 EP0009233 (B1)**Cited documents:** DE2435288
 US3809087
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 FR2304360**Report a data error here****Abstract of EP0009233**

1. A suction bottle (2) with a drain (4) which may be inserted in a field of operation, there being on the suction bottle (2) a connecting piece (5), which includes an openable closure device (7), for joining a connecting tube (3) to the drain (4), characterized in that the connecting tube (3) is provided with an intermediate element (12) close to the end next to the suction bottle (2), which element is formed particularly by a rubber-elastic tube piece (13), upon which there is arranged a sliding clip (10) as a shut-off device (8) for the tight closure of its internal channel (9).



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Mechanism for connecting a drain with a sucking mechanism the invention relates to a mechanism for connecting a drain inserted into an operation field with suction means, in particular a suction bottle, whereby provided at this a connector provided with obvious closure is to the terminal of the connection tube.

The aforementioned parts form generally speaking a drainage mechanism, which serves for the suction of Wundsekreten from body cavities.

Known way becomes with a necessary change that usually as suction means used suction bottle first the closure of the connector closed. Then the connection tube of the suction bottle becomes separate and a subsequent new Sauer bottle connected. Through open at the new Suction bottle of present closure becomes the Abs on procedure continued.

With changes of the suction bottle the negative pressure or Saugdruck in the connection tube, so that secretions, which are in the drain and in the Verbindungsschlauch and which should become discharged, at least partly into the Wundgebiet flow back, escapes and/or. by the negative pressure still dominant in the Wundgebiet sucked become also if necessary.

Thus a very large infection risk is given, by which the Genesungs and healing process can become adversely affected.

In the practice it has itself shown that bacteria with the separation of the connection tube of the suction bottle z. B. 40 cms in the connection tube toward to the Wundgebiet advance and to late also against the secretion stream fortbewegend the drain and the Wundgebiet turn. After comparatively short time thereby a very high germ settling in the Wundgebiet is to be registered.

Object of the invention is to be kept to a large extent germ-free it, a Wundgebiet occupied with a drainage also after repeated suction bottles changes and/or. the germ settling at least substantial too verringern.

The solution of this object proposed becomes that also the connection tube exhibits a shutoff device for dense locking of its depressing channel.

With the change of the suction bottle thereby the connection tube can become first dense sealed, so that avoided with the subsequent separation of the suction bottle from the connection tube a Zurückströmen can become into the drain and in the connection tube of located secretion.

In addition it is favourable with the fact that after attaching direct Sekret which can be sucked off lines up to the new suction bottle, so that a suction of air, IE is it with conventional connection tubes the case avoided become can. The effective Saugvolumen of the sucking bottle can be thereby enlarged.

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The Absperrvorrichtung of the connection tube close its is appropriately that suction A SMELLING DOING turned end disposed. Thus a AUSA EN of the shutoff device rear in suction direction can findlichem secretion with separated suction bottle before-avoided to become.

A possible embodiment plans that the connection tube exhibits an interruption, which is by the shutoff device a contained intermediate member bridged.

This intermediate member can become also additional good into a connection tube inserted.

Preferably the intermediate member is formed by a in particular elastic tube piece, is disposed on which a sliding clamp of the shutoff device. By the sliding clamp the resilient tube piece can become compressed, so that is present in this place a dense conclusion.

Additional embodiments of the invention are in the other Unteransprüchen listed.

Appended one is the invention on the basis the drawing more near described.

It shows: Fig. 1 a drainage mechanism with one suck bottle, a connection tube as well as a drain, Fig. 2 in the longitudinal section a held shut-off before direction with put in connection hose ends and Fig. 3 a side view of a Schiebekleame.

One generally speaking with 1 designated Drainaeeinrichtung to the suction of Wundsekreten from body concavities exhibits a suction bottle 2, a connection tube 3 as well as drain 4. The connection tube 3-ist over a connector 5 on the one hand with the Saugflasche 2 and at the other end over a connecting part 6 with the drain 4 connected. In the suction bottle 2 negative pressure prevails, so that Wundsekret over the drain 4 as well as the Verbindungsschlauch becomes 3 2 promoted into the suction bottle.

The connector 5 exhibits a closure 7, sealed dense before attaching the connection tube 3 with which the suction bottle becomes 2, around the sterile dominant in the suction bottle 2 and the there dominant negative pressure upstanding to e, - ten .al. After the insertion of the connection tube 3 into the connector 5 the closure 7 opened can become.

Now also the connection tube 3 according to invention exhibits an additional shutoff device 8 for dense locking of its depressing channel 9. With a change of the suction bottle 2 thereby the connecting hose 3 closed can become, so that in advantageous manner with the separation of the connection tube 3 from the connector 5 the Wundsekret standing as liquid column in the connection tube 3 not to the suction side, D. h. to the drain 4 and thus into the Wundgebiet flows back.

The shutoff device 8 is, as in Fig. 1 good recognizable, close at that the suction bottle 2 facing end of the connection tube 3 disposed.

In the represented embodiment the shutoff device exhibits a sliding clamp 10. Also the closure 7 on the connector 5 is with such a sliding clamp 10 A equipped. The sliding clamps 10, 10 A are plate shaped formed (see. Fig. 2 and 3) and points themselves in its width from a slot 11 narrowing to the other end to (Fig. 3). The respective slit width for instance at the ends of slit is in such a manner dimensioned with the fact that the tube led by this slot od.

such. into end position essentially in its cross section an unchanged remains, like this in Fig. 3 at the left end of the slot 11 the case is; on the other hand the tube in closed position can become brought, whereby it is slid into the closer part of the slot 11. Its inner walls lie on top of one another thereby dense, like this paint-lined also in Fig. 2 indicated is.

In particular Fig. good shows 2 that the connection tube 3 exhibits an interruption, which is by the shutoff device 8 a contained intermediate member 12 bridged. This intermediate member 12 is in the embodiment 13 formed by qu. mmi a resilient tube piece, is 8 disposed on which the sliding clamp 10 of the shutoff device. By this elastic tube piece 13 on the one hand a light actuation of the sliding clamp is 10 possible and on the other hand becomes thereby also a good tightness in closed position of the shutoff device 8 achieved.

Appropriately the two each other directed hose ends 3 A, 3 b and the tube piece serving as intermediate member 12 are of 13 at least in a part their overlapping areas bonded with one another. The hose ends 3 A, 3 b are good fixed thereby on the one hand in their layer and on the other hand can thereby approximately benenfalls also the tightness in ttberlappungsbereich improved be.

With the change of the suction bottle 2 now one proceeds as follows: The suction procedure becomes by shifting the sliding clamp 10 in. Closed position interrupted. The tube piece 13 is forced away, like it paint-lined in Fig. 2 and 3 is more recognizable. With the subsequent off the connection tube 3 from the Verbindungs pieces 5 pull - if necessary after against latches of the sliding clamp 10 A in suction direction before the locking off device 8 lining up liquid column cannot flow off because of the closed shutoff device 8 the Absaugrichtung.

A new suction bottle 2, in the negative pressure prevails and to the maintenance of this negative pressure by means of the closure 7 dense sealed is, can then with the free end of the connection tube 3 connected become. After opening first the closure 7 at the connector 5 and subsequent opening of the shutoff device 8 the suction procedure continued can become.

Beside the particular advantage that by the formation the connection tube 3 with shutoff device 8 flowing backward in the connection tube as well as in the drain 4 of located secretion avoided becomes, can for the order standing Saugvolumen of the suction bottle 2.

also still better utilized becomes. With the connection tube 3 promoted becomes after opening the closure 7 as well as the shutoff device 8 practical immediately Wundsekret; on the other hand otherwise the air located in the tube becomes sucked because of the Wundsekret zurückgeströmt with a suction bottle change first as "dead volumes". This can affect itself in particular with longer connection tubes 3 adverse. On the other hand made with the connection tube according to invention practical without substantial Flüssigkeitsunterbrechung immediately a continuation of the secretion promotion.

Altogether the infection risk, which is particularly large with the Saugflaschenwechsel in particular, can become substantially reduced by the new formation of a drainage. A germ settling of the Wundcrebietes by flowing back Wundsekret and. such. becomes thereby avoided.